

United States Department of Agriculture
Animal and Plant Health Inspection Service
Plant Protection & Quarantine
4700 River Road
Riverdale, MD 20737

Permit to Move Live Plant Pests, Noxious Weeds, and Soil
Interstate Movement
Regulated by 7 CFR 330

This permit was generated electronically via the ePermits system

PERMITTEE NAME:	Tammy Zimmer	PERMIT NUMBER:	P526P-19-03448
ORGANIZATION:	Joyn Bio	APPLICATION NUMBER:	P526-200803-019
ADDRESS:	37437 State Hwy 16 Woodland, CA 95695	DATE ISSUED:	08/14/2020
MAILING ADDRESS:	37437 State Hwy 16 Woodland, CA 95695	EXPIRES:	08/19/2022
PHONE:	916-494-9993	FACILITY NUMBER:	5283
ALT. PHONE:		HAND CARRY:	No
EMAIL:	tzimmer@joynbio.com, npumplin@joynbio.com	FACILITY ACCOUNT:	Joyn Bio
FAX:		RESEARCH CENTER:	
		FACILITY NAME:	
		FACILITY ADDRESS:	37437 CA-16 Woodland, California 95695
		FACILITY GPS:	
		MAIL ADDRESS:	37437 CA-16 Woodland, California 95695
		FACILITY CONTACT:	Nathan Pumplin
		PHONE:	5306011731
		ALT. PHONE:	
		FAX:	
		EMAIL:	npumplin@joynbio.com

DESTINATION: 37437 CA-16, Woodland, CA 95695

RELEASE: No

Under the conditions specified, this permit authorizes the following:

Regulated Article	Life Stage(s)	Intended Use	Shipment Origins	Originally Collected	Culture Designation
Acremonium implicatum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations	
Azotobacter chroococcum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations	

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Bacillus amyloliquefaciens	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus amyloliquefaciens	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus cereus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus firmus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus firmus strain I-1582 (EPA -reg)	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus licheniformis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus megaterium	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus megaterium	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus pumilus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus pumilus strain QST 2808 (EPA reg).	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Bacillus simplex	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus subtilis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Bacillus subtilis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
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Bacillus thuringiensis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Beauveria bassiana	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Coniothyrium minitans	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Epichloe amarillans	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Fusarium virguliforme	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Gluconacetobacter diazotrophicus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Herbaspirillum rubrisubalbicans	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Herbaspirillum seropedicae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Metarhizium anisopliae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium aerolatum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium bullatum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium cerastii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium extorquens	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium fujisawaense	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium gnaphalii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium gossypiicola	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Methylobacterium haplocladii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium iners	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium isbilenense	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium jeotgali	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium longum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium lusitanum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium mesophilicum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium organophilum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium oryzae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium oxalidis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations


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Methylobacterium persicinum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium phyllosphaerae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium phyllostachyos	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium podarium	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium pseudosasae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium pseudosasicola	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium rhodinum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium spp.	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Growth Chamber (lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium tardum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium tarhaniae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Methylobacterium thiocyanatum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium thuringiense	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium trifolii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Methylobacterium zatmanii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus amyolyticus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus anaericanus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus azotofixans	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus barengoltzii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus borealis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus brasilensis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Paenibacillus durus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus graminis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus jilunlii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus massiliensis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus odorifer	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus peoriae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus polymyxa	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus riograndensis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus typhae	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Paenibacillus wynnii	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations


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Paenibacillus zanthoxyli	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pseudomonas chlororaphis	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pseudomonas fluorescens	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pseudomonas putida	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Purpureocillium lilacinum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium heterothallicum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium inflatum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium irregulare	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium orthogonon	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium sylvaticum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

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Pythium torulosum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Pythium ultimum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Pest-infected plant material, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Sclerotinia sclerotiorum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Talaromyces flavus	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Trametes versicolor	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations
Trichoderma harzianum	Lyophilized plant or microbes, Microbial solutions, Mycelia, Petri dishes/culture tubes, Plant Parts, Spores, Whole Plants	Research - Greenhouse (growth chamber and lab included)	AK, AS, GU, HI, PR, VI, Continental U.S.	Originally Collected from Foreign and Domestic Locations

PERMIT GUIDANCE

- 1) This permit does not authorize movement or release into the environment of genetically engineered organisms produced with the regulated organisms described in this permit. Importation, interstate movement, and environmental release of genetically engineered plant pests require a different permit issued under regulations at 7 CFR part 340. Any unauthorized interstate movement or environmental release, including accidental release, of a regulated GE organism would be a violation of those regulations. Additional guidance and contact information for APHIS Biotechnology Regulatory Services, can be found at: <https://www.aphis.usda.gov/aphis/ourfocus/biotechnology>.
- 2) If an animal pathogen is identified in your shipment, to ensure appropriate safeguarding, please refer to http://www.aphis.usda.gov/import_export/animals/animal_import/animal_imports_an_products.shtml
- 3) If a human pathogen is identified, please refer to the CDC Etiologic Agent Import Permit Program at <http://www.cdc.gov/od/eaipp/>
- 4) This permit DOES NOT fulfill the requirements of other federal or state regulatory authorities. Please contact the appropriate agencies, such as the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the U.S. Food and Drug Administration, the Centers for Disease Control and Prevention, the APHIS Veterinary Services unit, the APHIS Biotechnology Regulatory Services, or

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your State's Department of Agriculture to ensure proper permitting.

5) If you are considering renewal of this permit, an application should be submitted at least 90 days prior to the expiration date of this permit to ensure continued coverage. Permits requiring containment facilities may take a longer period of time to process.

PERMIT CONDITIONS

USDA-APHIS issues this permit to Tammer Zimmer with Joyn Bio, in Woodland, California. This permit authorizes the interstate movement of the listed organisms and plant parts containing the listed organisms from the listed states and/or territories to California. This permit also authorizes the use of the regulated organisms for laboratory, growth chamber and greenhouse research in the APHIS approved facility #5283. This permit further authorizes continued curation of the listed organisms received under prior permit(s) for use in laboratory, growth chamber and limited greenhouse research in the APHIS approved facility #5283.

1.
 - This permit is issued by the United States Department of Agriculture's Animal and Plant Health Inspection Service (APHIS). It conveys APHIS regulations and requirements for the material(s) listed on this permit. It does not reduce or eliminate your legal duty and responsibility to comply with all other applicable Federal and State regulatory requirements.
 - The permit number or a copy of the permit must accompany the shipment.
 - You must be an individual at least 18 years old, or legal entity such as partnership, corporation, association, or joint venture.
 - You are legally responsible for complying with all permit requirements and permit conditions.
 - The regulated material and shipping container(s) are subject to inspection by officials of Custom and Border Protection (CBP) and APHIS. CBP or APHIS officials may require the shipment to be treated, seized, re-exported, or destroyed (in part or whole). You will be responsible for expenses.
 - If you violate any applicable laws associated with this permit, you may face substantial civil or criminal penalties. We may cancel all current permits and deny future permit applications.
 - Without prior notice and during reasonable hours, authorized Federal and State Regulators must be allowed to inspect the conditions associated with the regulated materials/organisms authorized under this permit.

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2. The permit holder must:

- maintain a valid PPQ526 permit so long as the regulated materials/organisms are alive or viable,
- not assign or transfer this permit to other persons without APHIS PPQ authorization,
- maintain an official permanent work assignment, residence, or affiliation at the address on this permit,
- notify the Pest Permit Staff as soon as possible of any change in the permit holder's work assignment, residence, or affiliation,
- notify the Pest Permit Staff of the receipt of unauthorized and/or misdirected shipments of regulated materials/organisms,
- adequately mitigate environmental impacts resulting from unauthorized release of regulated materials/organisms and notify the Pest Permit staff immediately if one occurs,
- notify the Pest Permit Staff if the facility is damaged/destroyed or if you wish to decommission the facility,
- destroy all regulated materials/organisms prior to departure from the organization unless other arrangements are confirmed by the Pest Permit Staff.

Notifications to the Pest Permit Staff must be made via 866-524-5421 or pest.permits@usda.gov within one business day of the event triggering a notification.

3. This permit does not authorize movement or use of organisms listed in the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. If any organism listed as a Select Agent is identified from materials associated with this research, the permit holder is required to notify APHIS, Agriculture Select Agent Services (AgSAS) immediately by phone at 301-851-3300 option 3, and within seven (7) days submit APHIS/CDC Form 4A (Report of Identification of a Select Agent or Toxin in a Clinical or Diagnostic Laboratory) to APHIS, AgSAS; 4700 River Rd, Unit 2, Riverdale, MD 20737 (see instructions at: https://www.selectagents.gov/resources/APHIS-CDC_Form_4_Guidance_Document.pdf). Failure to comply with this requirement is a violation of the Agricultural Bioterrorism Protection Act of 2002. For a complete list of Select Agents please visit:

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<https://www.selectagents.gov/selectagentsandtoxinslist.html>


Select agents include: *Peronosclerospora philippinensis* (*Peronosclerospora sacchari*), *Coniothyrium glycines* (formerly *Phoma glycinicola* and *Pyrenochaeta glycines*), *Ralstonia solanacearum*, *Rathayibacter toxicus*, *Sclerophthora rayssiae*, *Synchytrium endobioticum*, *Xanthomonas oryzae*, *Bacillus anthracis*, *Brucella abortus*, *Brucella melitensis*, *Brucella suis*, *Burkholderia mallei*, and *Burkholderia pseudomallei*.

4. All persons working with the listed regulated materials/organisms must be informed of these permit conditions. Anyone working with these materials/organisms must agree to adhere to and sign/initial these conditions before beginning work. These signed conditions do not need to be submitted to USDA/APHIS but must be readily accessible and made available to Federal and State regulators upon request.

Note: these conditions may be copied and stored electronically for electronic signature and initialing provided that the permit number, authorized materials/organisms and life stages, release locations if applicable, and authorization statement all appear on the document with the permit number. Signing these conditions only indicates that the person working under this permit has read them; the permit holder is the sole responsible party under this permit.

5. Field collected infected host material may include, but is not necessarily limited to, plants, plant parts, and soil.
6. All packages for transport must minimally consist of both inner/primary and outer/secondary packages securely sealed so that both are effective barriers to escape or unauthorized dissemination of the listed materials/organisms. The inner/primary package(s) will contain all regulated materials/organisms and must be cushioned and sealed in such a way that it remains sealed during shock, impact, and pressure changes that may occur. The outer/secondary shipping container must be rigid and strong enough to withstand typical shipping conditions (dropping, stacking, impact from other freight, etc.) without opening.
7. Upon receipt all samples potentially containing mobile arthropod contaminants must be placed in a refrigerator for at least 4 hours prior to opening the package. Following this initial processing, living arthropod contaminants must be devitalized.
8. Upon receipt, all packages must be opened within a Class II or III biosafety cabinet in the approved containment facility identified above to prevent the potential dissemination of the package contents. Cultures must be in a sealed container during transport to or within the permit holder's assigned research facilities.
9. IF INFECTED HOST MATERIAL INCLUDES SOIL THEN THE FOLLOWING APPLIES:
 - Adequate protective clothing must be worn when working with soil and infected/infested samples so that movement of plant pests out of the facilities on hands, clothing, and shoes does not occur.


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- The laboratory floor must be uniform (i.e., no cracks/defects) and made of materials that can be cleaned. The floor must be maintained free of soil and infected/infested material.
 - Work benches must be uniform (i.e., no crack/defects) and made of materials that can be cleaned. When not working with the regulated material, the benches must be cleaned and maintained free of soil and infected/infested material.
 - Any sink that drains water that may contain live plant pests/pathogens harbored by infested soil samples must be equipped with traps that allow collection of waste water. The waste water must be treated according to the devitalization and waste disposal condition in this permit before final disposal.
10. All research activities, plant inoculations and subsequent disease development must occur within the APHIS approved Containment Facility identified above that has been inspected and found adequate for containment of the organisms received under this permit. Access to this facility must be restricted to authorized personnel.
 11. Plant inoculations using organisms that are listed on this permit at the species level are authorized in greenhouses and growth chambers. Plant inoculations using organisms listed on this permit at the genus level or higher (e.g. *Methylobacterium* spp.) are restricted to growth chambers only.
 12. Vector transmission is not permitted under this authorization. Only mechanical inoculation of plants is permitted.
 13. Measures to control potential insect vectors (e.g. black lights, yellow sticky boards, insecticides) must be in place.
 14. Greenhouses must be screened to minimize presence of insect vectors.
 15. Records must be kept of all organisms maintained under this permit. Minimally the record will consist of the name of the organism identified to the lowest taxon possible, the country, or US state/territory, where each isolate was collected, and the date the isolate was received. These records must be made available to Federal and State regulators upon request.
 16. When not working with the regulated materials/organisms, you must store and/or maintain them within the APHIS approved containment facility identified above. All stored regulated materials/organisms must be kept in a locked area with access limited to authorized personnel.
 17. Standard Operating Procedures (SOPs) must be filed with, and approved by, the APHIS PPQ Pest Permit Staff at: email: pest.permits@usda.gov; phone: 866-524-5421; fax: 301-734-8700; address: 4700 River Road, Unit 133, Riverdale, MD 20737. All contact information must be kept current and the SOPs must be dated. If requirements in the permit conditions are more restrictive than the SOPs, permit conditions take precedence. APHIS PPQ must approve any changes to the SOPs before implementation.

A list of all persons with access to the containment facility must be maintained and available upon

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request by Federal or State Regulatory Officials.

All persons working with the regulated material/organism(s) must be trained on, and implement the permit conditions, and all APHIS approved SOPs governing the facility listed above.

18. Modifications to the containment facility or any changes that affect the containment of the regulated materials/organisms must be approved by APHIS prior to making changes. Please contact the Pest Permit Staff (email: pest.permits@usda.gov; phone: 866-524-5421; address: 4700 River Rd., Unit 133, Riverdale, MD 20737; Fax: 301-734-8700).

19. DEVITALIZATION AND WASTE DISPOSAL

All regulated materials/organisms and all items coming in direct contact or exposed to the regulated materials/organisms must be sterilized/sanitized/decontaminated prior to removal from the authorized containment facility. This includes all items from shipping, culturing, care, and maintenance of these regulated materials/organisms. This requirement includes but is not necessarily limited to: packaging directly exposed to the regulated materials/organisms, substrates (culture media, soil, plant materials (food materials or host plants)), leftover/unused/unneeded live cultures, and dead specimens/cultures unless specified otherwise in the permit.

Prior to disposal or reuse, you must treat all contaminated and all potentially contaminated materials by one of the following methods, either alone or in combination:

- 1) autoclaved (see protocol below), 2) disposed of off-site by a facility holding a valid PPQ compliance agreement (organisms and/or contaminated waste must be stored in sealed containers prior to pick up by this company), 3) incinerated, 4) immersed in 5,250-6,000 PPM sodium hypochlorite solution (1 part fresh household bleach to 9 parts water) for at least 20 minutes, or 5) immersed in 70 percent alcohol for at least 30 minutes.


Treated waste will be double bagged prior to disposal.

Other sterilization methods are only allowed with prior written agreement from the USDA/APHIS PPQ Pest Permit Staff.

If using an autoclave the following protocol must be used:

- Waste must be autoclaved at 121 Celsius (250 Fahrenheit) for a minimum of 30 minutes at 15 psi.
- Autoclave tape or other indicators must be placed on each load prior to treatment. The autoclave tape or other indicator on each container must be checked to verify color change before disposal.
- The autoclave must be calibrated according to the manufacturer's instructions annually and a commercially available biological indicator kit that uses bacterial spores of *Geobacillus stearothermophilus* that are rendered unviable at 121 Celsius (250 Fahrenheit) must be used every three months.

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OR

The autoclave must be calibrated according to the manufacturer's instructions every two years and a commercially available biological indicator kit that uses bacterial spores of *Geobacillus stearothermophilus* that are rendered unviable at 121 Celsius (250 Fahrenheit) must be used every two weeks.

d. A written record of the calibration and the biological indicator tests must be maintained. You must follow the manufacturer's instructions for the *Geobacillus stearothermophilus* and if any growth is observed, you must have the autoclave serviced and retested before it is used again for the regulated articles/organisms listed on this permit.

20. As an alternative to the DEVITALIZATION AND WASTE DISPOSAL requirements listed above, devitalization/destruction of organisms and infected material may be conducted off site by a facility holding a valid PPQ compliance agreement prior to disposal. Vendor may or may not be in the same state. All organisms, contaminants and/or packaging materials must be in sealed containers during transport to this waste management facility in order to prevent any unauthorized dissemination of the regulated articles.
21. There is to be no further movement or distribution of the listed regulated materials/organisms within the United States and its territories unless the recipient holds, or is named as a responsible party on a valid PPQ526 permit for receipt of such materials/organisms.

END OF PERMIT CONDITIONS

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